Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-22. (Cancelled)

23. (Currently Amended)   An image processing device for acquiring an enlarged image by enlarging a specific image data to a desired enlargement size, said device comprising:

Original Images orthogonal transforming means for generating [[the]] frequency components of an original image by performing orthogonal transform on said specific image data,

Enlarged Frequency estimating means for estimating [[the]] frequency components of said enlarged image by performing nonlinear interpolation on the frequency components of said original image frequency components, and

Inverse orthogonal transform means for acquiring an enlarged image data by performing inverse orthogonal transform corresponding to said enlargement size on said estimated frequency components of the enlarged image.

24-31. (Cancelled)

32. (Currently Amended)   An image processing method for acquiring an enlarged image by enlarging a specific image data to a desired enlargement size, said method comprising the steps of:

original image orthogonal transforming for performing orthogonal transform on said

specific image data to generate [[the]] frequency components of the original image,

enlarged frequency estimating for estimating [[the]] frequency components of said

enlarged image by performing nonlinear interpolation on the frequency components component

of said original image, and

inverse orthogonal transforming for performing inverse orthogonal transform –

corresponding to said enlarged size – on the frequency components of said estimated enlarged

image to acquire enlarged image data.

33-39. (Cancelled)

40. (Currently Amended)   A recorded medium on which a program is recorded, said

program – when obtaining an enlarged image by enlarging a specific image data to a desired

enlargement size – generating [[the]] frequency components component of an original image by

performing orthogonal transform on said specific image data, estimating [[the]] frequency

components component of said enlarged image by performing nonlinear interpolation on the

frequency components of said original image frequency component, and performing inverse

orthogonal transform corresponding to said enlarged size on the frequency components

component of said estimated enlarged image, thereby acquiring said enlarged image.

41-62. (Cancelled)

63. (New) An image processing device for acquiring an enlarged image by enlarging specific image data to a desired enlargement size, said device comprising:

original images orthogonal transforming means for generating frequency components of an original image by performing orthogonal transform on said specific image data;

enlarged frequency estimating means for estimating a nonlinear relation between frequency components of said enlarged image and component positions based on the frequency components of the original image to obtain the frequency components of said enlarged image; and

inverse orthogonal transform means for acquiring an enlarged image data by performing inverse orthogonal transform corresponding to said enlargement size on said obtained frequency components of the enlarged image.

64. (New) An image processing device according to claim 63, wherein said enlarged frequency estimating means estimates the nonlinear relation by using a neural network represented by a radial basis function network or a feedforward neural network.

65. (New) An image processing device according to claim 63, further comprising approximate coefficient deriving means for deriving an approximate coefficient vector in a radial basis function network from the frequency components of the original image,

wherein said enlarged frequency estimating means obtains the frequency components of said enlarged image from the approximate coefficient vector and radial basis functions.

66. (New)   An image processing method for acquiring an enlarged image by enlarging specific image data to a desired enlargement size, said method comprising the steps of:

original image orthogonal transforming for performing orthogonal transform on said specific image data to generate frequency components of the original image;

enlarged frequency estimating for estimating a nonlinear relation between frequency components of said enlarged image and component positions based on the frequency components of the original image to obtain the frequency components of said enlarged image; and

inverse orthogonal transforming for performing inverse orthogonal transform corresponding to said enlarged size on the frequency components of said obtained enlarged image to acquire enlarged image data.

67. (New)   A recording medium recording a program for acquiring an enlarged image by enlarging specific image data to a desired enlargement size, said program, when executed, causing a computer to perform the steps of:

original image orthogonal transforming for performing orthogonal transform on said specific image data to generate frequency components of the original image;

enlarged frequency estimating for estimating a nonlinear relation between frequency components of said enlarged image and component positions based on the frequency components of the original image to obtain the frequency components of said enlarged image; and

inverse orthogonal transforming for performing inverse orthogonal transform corresponding to said enlarged size on the frequency components of said obtained enlarged image to acquire enlarged image data.